

be sufficient in most cases, in this part of the country, and would only cost 30 cents per rod, about \$18 per acre. But for sake of illustration we will take the figure at 26 66½¢ to see how much more each acre would have to produce in addition to what it formerly produced, to pay interest at 6 per cent. on amount expended, which would be \$16 56½¢ on 10 acres or \$1 55½¢ per acre and in order to show the result clearly we will take year's rotation for example:—1st year wheat at 1s 3d per bushel about 6 bushels, 2nd year wheat at 5s, per bush. 1½ “ 3rd year oats, at 1s 3d “ C “ 4th year barley, 3s. “ 2s “ 5th year hay, 40s. per ton, 350 lbs.

6th year pasture, increase of which will pay. 7th year oats, 1s. 3d. per bush., 6 bushels. There is not the slightest doubt this increase might be obtained, even were the figures half as again. I think that those of you who had experience in the benefits to be derived from a system of thorough drainage agree with me in thinking that it is not underrated.

Now, on the other hand, we will see whether thorough draining will pay. Taking again for example a field of 10 acres, in which there is a water run or runs to the extent of 100 rods in length, and 4 rods in width, which is frequently the case; that is, supposing 4 rods on each side of the drain to be wet and soggy, in consequence of which it has produced more than half a crop, and is as worse to work than any other acre of field; and the average yield on which, say, of wheat, for sake of calculation, is about ten bushels, which, at \$1, is \$10. Now we will take the cost of

1—cutting, laying, and filling,	
cents per rod.....	\$6 00
tile, or 650, at \$10 per 1,000	6 50

\$12 50

we will take an average crop from the field after being drained, 20 bushels, and the increase in yield by draining, 10 bushels, at 2s; which would pay within \$2 50 of the cost of draining during the first year. Now, is this estimate not over drawn, and is it those who have drained such places who put an account of the cost, and the increase in yield; they would, in most cases, bear out this calculation.

It is then, that has been delayed, year

after year, by the wetness of his land in getting his spring work done, or has had the troubles incident to cold wet seasons, will not see the necessity of draining every acre of his land by artificial drainage, which has not a natural drainage of itself.

Taking it for granted that it will pay to drain land, let me bring to your notice a few important considerations in connection with some of the modes of drainage, and first in regard to some of the leading features of the old open ditch and water furrow system, which I may say prevailed to a great extent at one time in Britain and even now in this country. No doubt, open ditches are often required in connection with the most approved methods of thorough draining, as receivers or outlets to tile or other covered drains. But taking them in connection with the water-furrow system, they have been found very objectionable in many ways. First, they are too expensive; the first cost of construction is much more than that of a covered drain, owing to the great depth to which they require to be dug before they will withstand the action of the frost and weather.—Secondly, they require too much attention to keep them clean, and in good order, as they generally require to be cleaned out at least once every year, and very often twice, in consequence of the accumulation of various substances carried into them, which, if not removed, would choke them up and render them useless.—Thirdly, they occupy too much land, and are an obstruction to good husbandry: no doubt this is the case, because if open ditches were opened at every wet place or water run in our fields, they would be found a great source of trouble and annoyance in the cultivation of the other portions of land, and would prove a harbour for weeds.—Fourthly, they, in connection with the high ridge and deep water furrow system, have the effect of impoverishing the soil, because the great quantities of rain or snow annually falling upon the soil must either be carried off by evaporation, filtration, or run off upon the surface; and by being carried off by the deep water furrows, the consequence is, that a large amount of the manure and finer portions of the soil is carried off also, and washed into the open ditches. These, then, gentlemen, are some of the principal objections to open drains, and the water furrow system, which has been given up altogether in Britain for some years past.

It is acknowledged by all writers on this